
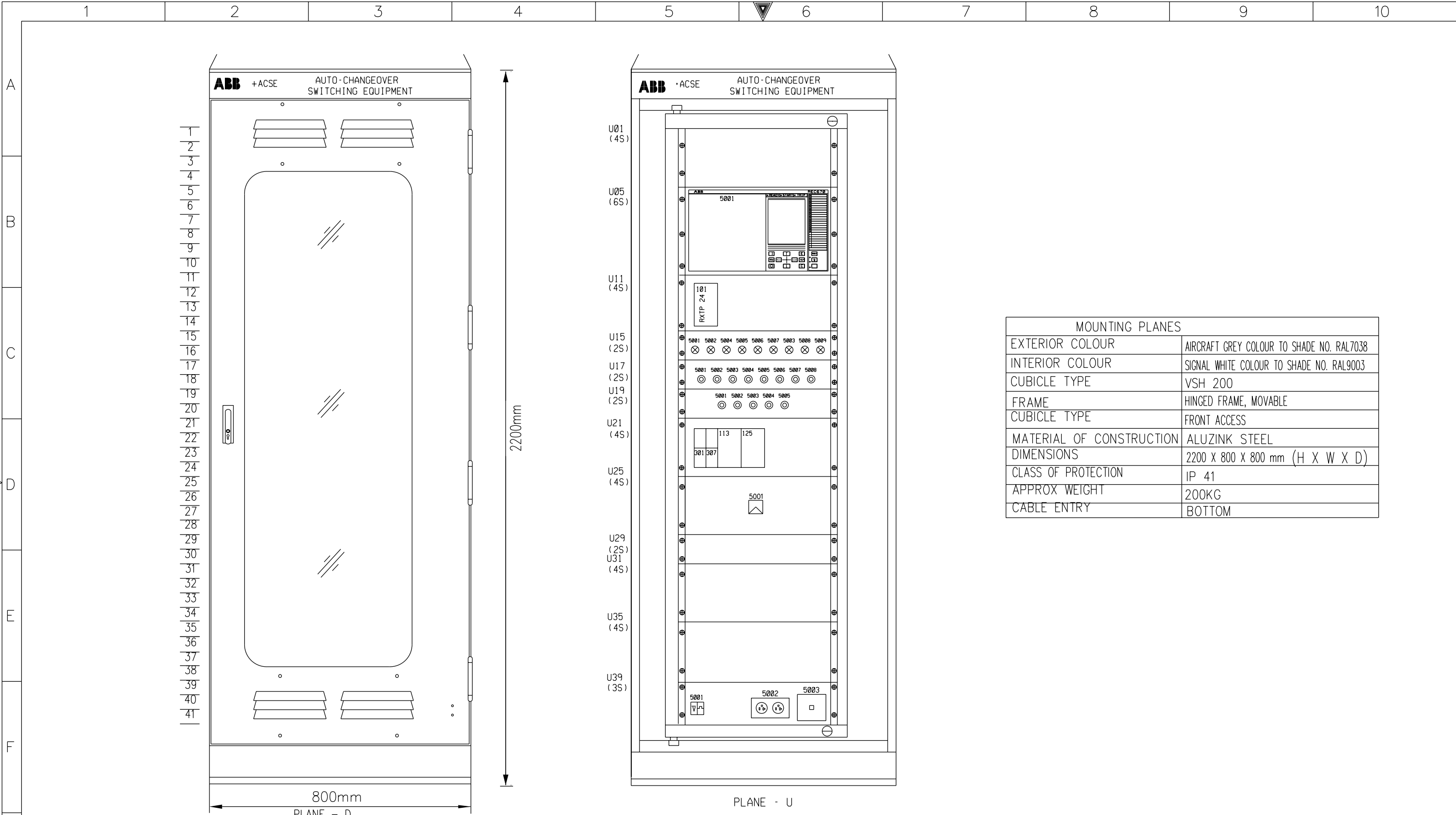


	1	2	3	4	5	6	7	8	9	10
A			POWER SYSTEMS NETWORK MANAGEMENT PROTECTION AND SUBSTATION AUTOMATION SYSTEMS WBS NO: S-13656					ABB AUTOMATION COMPANY LTD., 414, AL-KHARJ ROAD SECOND INDUSTRIAL CITY RIYADH-11383 K.S.A		
B										
C	CONTRACTOR : ABB Contracting Company									
	CLIENT : National Gridsa									
D	PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY									
	SUBSTATION : S/S 8709									
E	CONTRACT NO. : 11131113/00									
	TITLE : Assembly Drawing – +ACSE(AUTO CHANGE OVER SWITCHING EQUIP.)									
F										
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>	
			DRAWN BY RIZ CHECKED BY KVR		13.8kV AUTO CHANGE OVER SWITCHING EQUIPT		INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.
			DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY					SHT CONT.
	00	13 04	FOR APPROVAL		RIYADH SAUDI ARABIA		-	C421	CD-322960	G00G01
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC					REV. NO.

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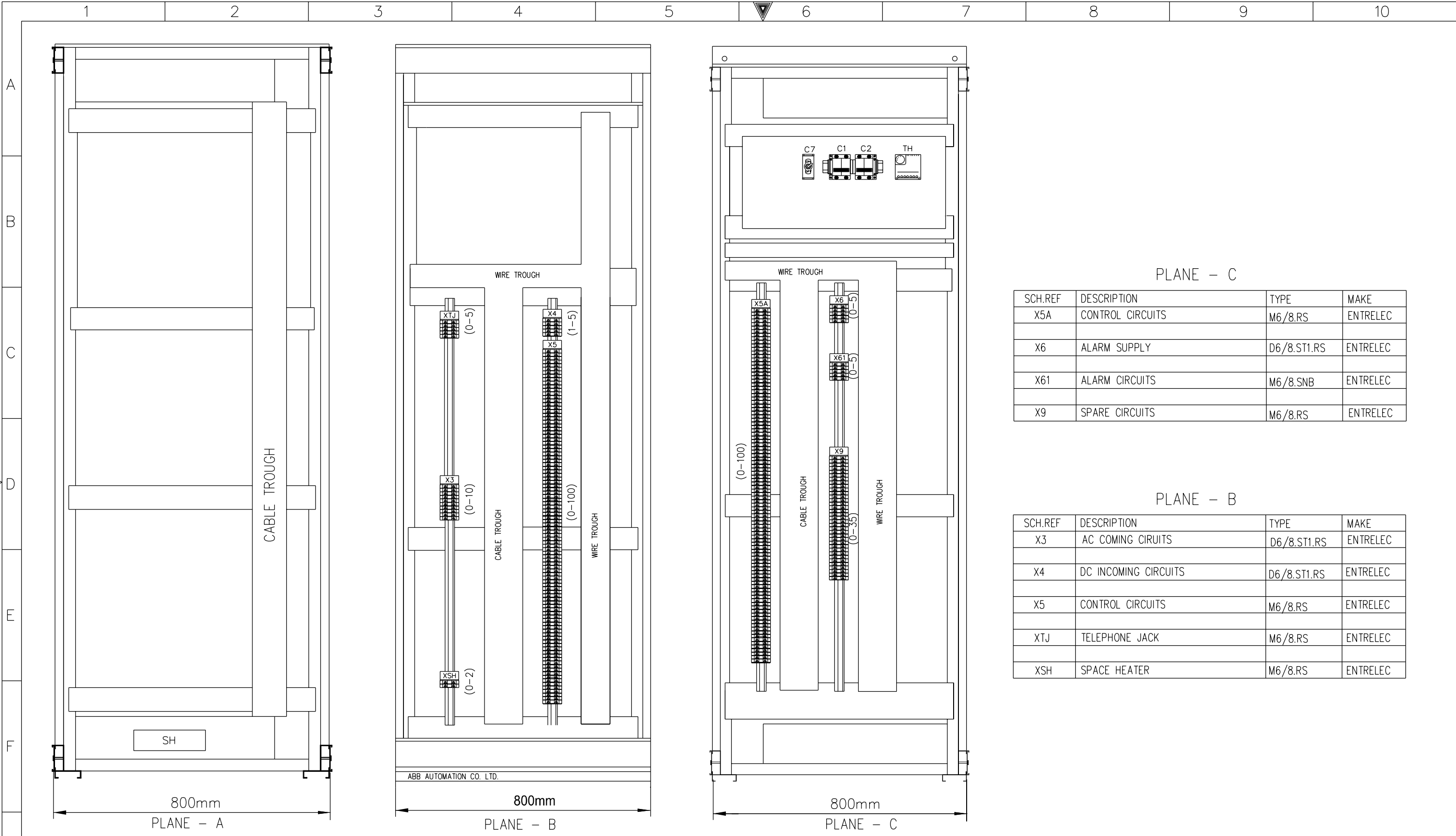
MOUNTING PLANES	
EXTERIOR COLOUR	AIRCRAFT GREY COLOUR TO SHADE NO. RAL7038
INTERIOR COLOUR	SIGNAL WHITE COLOUR TO SHADE NO. RAL9003
CUBICLE TYPE	VSH 200
FRAME	HINGED FRAME, MOVABLE
CUBICLE TYPE	FRONT ACCESS
MATERIAL OF CONSTRUCTION	ALUZINK STEEL
DIMENSIONS	2200 x 800 x 800 mm (H X W X D)
CLASS OF PROTECTION	IP 41
APPROX WEIGHT	200KG
CABLE ENTRY	BOTTOM

AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

			DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>
			DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____
00	13 04	FOR APPROVAL	OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>
REV. NO.	DATE	DESCRIPTION	

ASSEMBLY DRAWING
13.8kV AUTO CHANGE OVER SWITCHING EQUIP
S/S 8709-132/13.8KV IN AL-KHARJ CITY
RIYADH SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء		نقل الكهرباء		National Grid sa	
INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	
-	C421	CD-322960		SHT	CONT.
				G01	G02
					00



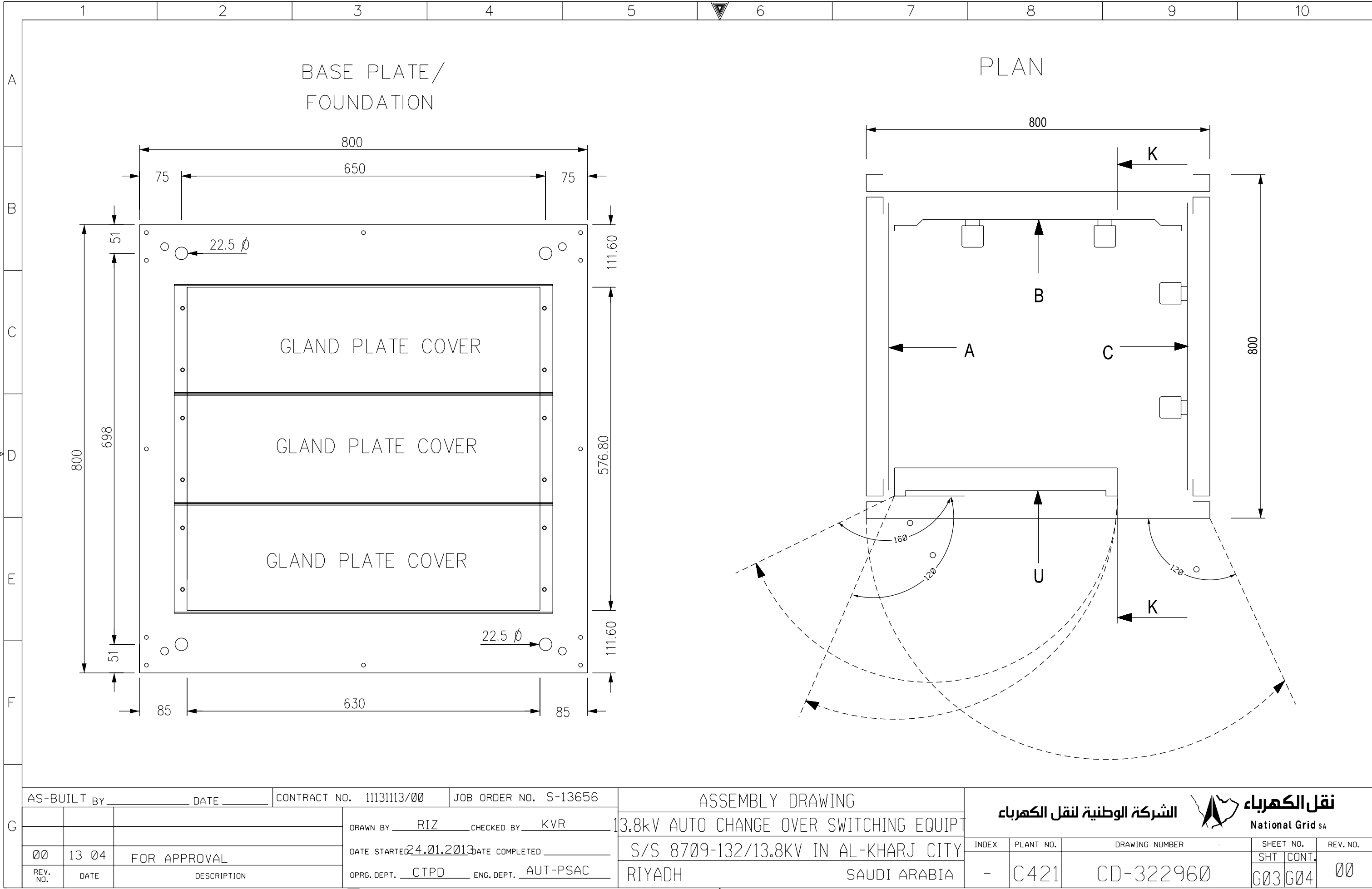
PLANE – C

SCH.REF	DESCRIPTION	TYPE	MAKE
X5A	CONTROL CIRCUITS	M6/8.RS	ENTRELEC
X6	ALARM SUPPLY	D6/8.ST1.RS	ENTRELEC
X61	ALARM CIRCUITS	M6/8.SNB	ENTRELEC
X9	SPARE CIRCUITS	M6/8.RS	ENTRELEC

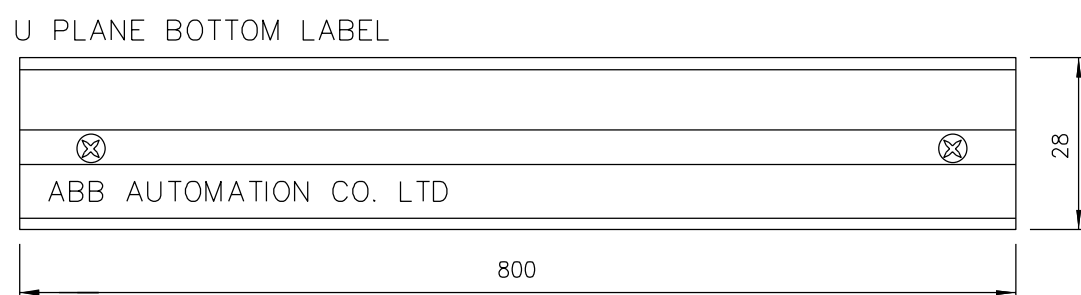
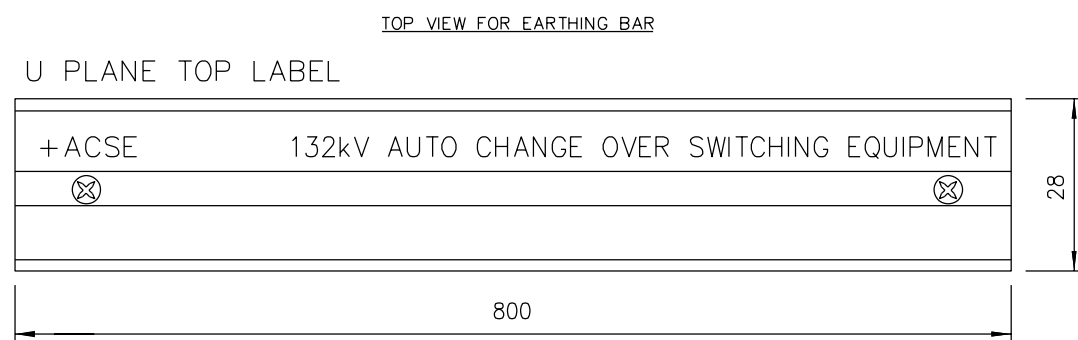
PLANE – B

SCH.REF	DESCRIPTION	TYPE	MAKE
X3	AC COMING CIRUITS	D6/8.ST1.RS	ENTRELEC
X4	DC INCOMING CIRCUITS	D6/8.ST1.RS	ENTRELEC
X5	CONTROL CIRCUITS	M6/8.RS	ENTRELEC
XTJ	TELEPHONE JACK	M6/8.RS	ENTRELEC
XSH	SPACE HEATER	M6/8.RS	ENTRELEC

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		ASSEMBLY DRAWING		<div>الشركة الوطنية لنقل الكهرباء</div> <div>National Grid sa</div>	
			DRAWN BY RIZ CHECKED BY KVR		13.8kV AUTO CHANGE OVER SWITCHING EQUIPT					
DATE STARTED 24.01.2013 DATE COMPLETED _____			S/S 8709-132/13.8KV IN AL-KHARJ CITY		RIYADH		SAUDI ARABIA			
REV. NO. 00 DATE 13 04 FOR APPROVAL			OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC							



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MANUFACTURING LABEL


ABB ABB Automation Co.Ltd.

PROJECT	:	National Grid SA S/S 8709
ORDER REFERENCE	:	2875 RF S13656
YEAR OF MANUFACTURE:		2013
PANEL NO.	:	+ACSE
DRAWING NO.	:	S13656-CD-322962

MADE IN THE KINGDOM OF SAUDI ARABIA

G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13020		ASSEMBLY DRAWING		<div><div><div><div>نقل الكهرباء</div><div>الشركة الوطنية لنقل الكهرباء</div><div>National Grid sa</div></div></div></div>					
					DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>		13.8kV AUTO CHANGE OVER SWITCHING EQUIPT							
	00	13 04	FOR APPROVAL		DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	REV. NO.
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH SAUDI ARABIA		-	C421	CD-322960		SHT G04	CONT. L00

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B										
C	CONTRACTOR : ABB Contracting Company									
	CLIENT : National Gridsa									
D	PROJECT : CONSTRUCTION OF NEW 132/13.8kv SS 8709 IN AL-KHARJ CITY									
	SUBSTATION : S/S 8709									
E	CONTRACT NO. : 11131113/00									
F	TITLE : LIST OF APPARATUS – +ACSE [AUTO CHANGE OVER SWITHING EQUIP.]									
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COVER SHEET		<div>الشركة الوطنية لنقل الكهرباء National Grid sa</div>	
			DRAWN BY RIZ CHECKED BY KVR		13.8kv AUTO CHANGE OVER SWITCHING EQUIPT					
	00	13 04	DATE STARTED 24.01.2013 DATE COMPLETED		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY		INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC					REV. NO.
					RIYADH SAUDI ARABIA		-	C421	CD-322960	L00L01 00

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	SR. NO.	LOCATION REF.	SCH REF.	D E S C R I P T I O N		SHT NO.	QTY.	TYPE	MAKE	ORDERING INFORMATION
	1			RELAY PANEL		301	1	VSH 200	ABB	
				LOGIC SCHEME FOR TRANSFORMER AUTO CHANGEOVER FUNCTION COMPRISING THE FOLLOWINGS						
	2	U05.5001	ACSE	AUTO CHANGEOVER SWITCHING EQUIPMENT WITH THE FOLLOWING SPECIFICATION		222	1	REC 670	ABB	1MRK 004- 814-AC
				AUXILIARY VOLTAGE : EL-(90-250V DC)						
				FREQUENCY : 50/60HZ						
	3			LENS : CLEAR		224A	9	KL1-100C	ABB	1SFA 611 400 R1008
				LED : 110-130V, 4-6MA				MCBH-003		1SFA 611 605 R1400
				HOLDER RATING : 115V WITH RESISTOR DIODE BLOCK				KA2 2145		1SFA 616 921 R2145
		U15.5001	H01	ACSE IN						
		U15.5002	H02	ACSE OUT						
		U15.5003	H03	TOP IN						
		U15.5004	H04	TOP OUT						
		U15.5005	H05	ACSE READY						
		U15.5006	H06	ACSE ABORT						
		U15.5007	H07	TOP READY						
		U15.5008	H08	TOP ABORT						
		U15.5009	H09	TOP FAIL						
	4	U11.101	TS-1	TEST SWITCH FOR OUTPUTS		222	1	RTXP24	ABB	RK 926 315-AS
	5	U25.5001	SS L/R	LOCAL REMOTE SWITCH						
				CONTACT DATA : 3NO LOCAL +3NO REMOTE		220	1	R20 2/4	COM-	R193L-204-27-07-04-20302
									-ELECTRIC	

	1	2	3	4	5	6	7	8	9	10								
A																		
B	SR. NO.	LOCATION REF.	SCH REF.	D E S C R I P T I O N		SHT NO.	QTY.	TYPE	MAKE	ORDERING INFORMATION								
	6	U17.5001	S01	PUSH BUTTON BLACK COLOUR WITH 2N/O CONTACTS FOR 'ACSE ABORT'		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	7	U17.5002	S02	PUSH BUTTON BLACK COLOUR WITH 1N/O CONTACTS FOR LED RESET		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
C	8	U17.5003	S03	PUSH BUTTON BLACK COLOUR UNIT FOR "ACSE-IN" CONTACTS DATA : 2NO		226	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	9	U17.5004	S04	PUSH BUTTON BLACK COLOUR UNIT FOR "ACSE-OUT" CONTACTS DATA : 2NO		226	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	10	U17.5005	S05	PUSH BUTTON BLACK COLOUR UNIT FOR "TOP-IN" CONTACTS DATA : 2NO		226	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
D	11	U17.5006	S06	PUSH BUTTON BLACK COLOUR UNIT FOR "TOP-OUT" CONTACTS DATA : 2NO		226	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	12	U17.5007 U17.5008	S07 PBLT	PUSH BUTTON BLACK COLOUR UNIT WITH 2NO CONTACTS FOR TOP ABORT.		223,224A	2	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	13	U19.5001	S08	PUSH BUTTON BLACK COLOUR UNIT WITH 2NO CONTACTS FOR TRIP ON PARALLEL REQUEST - GT-1 LV CB(S1305)		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
E	14	U19.5002	S09	PUSH BUTTON BLACK COLOUR UNIT WITH 2NO CONTACTS FOR TRIP ON PARALLEL REQUEST - GT-2 LV CB(S1205)		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	15	U19.5003	S10	PUSH BUTTON BLACK COLOUR UNIT WITH 2NO CONTACTS FOR TRIP ON PARALLEL REQUEST - GT-3 LV CB(S3605)		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	16	U19.5004	S11	PUSH BUTTON BLACK COLOUR UNIT WITH 2NO CONTACTS FOR TRIP ON PARALLEL REQUEST - BS1 CB(S120)		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
F	17	U19.5005	S12	PUSH BUTTON BLACK COLOUR UNIT WITH 2NO CONTACTS FOR TRIP ON PARALLEL REQUEST - BS2 CB(S320)		223	1	MP1-10B MCBH-20	ABB	1SFA 611 100 R1006 1SFA 611 605 R1102								
	18	U21.301	K7X/Y	DUAL COIL AUXILARY RELAY "IN PUT DISCREPENCY/ACSE FAULTY" CONTACTS : 3 NO PER COIL AUX. VOLTAGE : 110-125V DC FLAG : HAND RESET		226	1	RXSF1	ABB	RK 271 018-AN								
	19	U21.113	ACSEX	DUAL COIL AUXILARY RELAY FOR ACSE OUT AUXILIARY VOLTAGE : 125V DC CONTACTS DATA : 7 NO. + 7NC		226	1	RXMBV4	ABB	RK 251 401-AP								
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS											
			DRAWN BY RIZ CHECKED BY KVR				13.8kv AUTO CHANGE OVER SWITCHING EQUIPT											
			DATE STARTED 24.01.2013 DATE COMPLETED _____				S/S 8709-132/13.8KV IN AL-KHARJ CITY											
	00		13 04		FOR APPROVAL				RIYADH SAUDI ARABIA									
REV. NO.		DATE		DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		INDEX -		PLANT NO. C421	DRAWING NUMBER CD-322960		SHEET NO. L02		CONT. L03		REV. NO. 00	



الشركة الوطنية لنقل الكهرباء

SHT	CONT.	REV. NO.
L02	L03	00


NG/D2-D (2012/01)

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AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>		
			DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>		13.8kV AUTO CHANGE OVER SWITCHING EQUIPT			INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
00	13 04	FOR APPROVAL	DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709-132/13.8KV IN AL-KHARJ CITY						SHT	CONT.
REV. NO.	DATE	DESCRIPTION	OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH SAUDI ARABIA			-	C421	CD-322960	L05	L06
												00

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G	<table><tr><td colspan="3">AS-BUILT BY _____ DATE _____</td><td colspan="2">CONTRACT NO. 11131113/00</td><td colspan="2">JOB ORDER NO. S-13656</td><td colspan="3">LIST OF APPARATUS</td><td colspan="2"><div>الشركة الوطنية لنقل الكهرباء</div><div> نقل الكهرباء National Grid sa</div></td></tr><tr><td></td><td></td><td></td><td colspan="2">DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u></td><td colspan="3">13.8kV AUTO CHANGE OVER SWITCHING EQUIPT</td><td>INDEX</td><td>PLANT NO.</td><td>DRAWING NUMBER</td><td>SHEET NO.</td><td>REV. NO.</td></tr><tr><td></td><td></td><td></td><td colspan="2">DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____</td><td colspan="3">S/S 8709-132/13.8KV IN AL-KHARJ CITY</td><td></td><td></td><td></td><td>SHT</td><td>CONT.</td></tr><tr><td></td><td>00</td><td>13 04</td><td colspan="2">FOR APPROVAL</td><td colspan="3">RIYADH SAUDI ARABIA</td><td>-</td><td>C421</td><td>CD-322960</td><td>L06</td><td>---</td></tr><tr><td></td><td>REV. NO.</td><td>DATE</td><td colspan="2">DESCRIPTION</td><td colspan="2">OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u></td><td colspan="3"></td><td colspan="3"></td></tr></table>										AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>					DRAWN BY <u>RIZ</u> CHECKED BY <u>KVR</u>		13.8kV AUTO CHANGE OVER SWITCHING EQUIPT			INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.				DATE STARTED <u>24.01.2013</u> DATE COMPLETED _____		S/S 8709-132/13.8KV IN AL-KHARJ CITY						SHT	CONT.		00	13 04	FOR APPROVAL		RIYADH SAUDI ARABIA			-	C421	CD-322960	L06	---		REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>							
AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		LIST OF APPARATUS			<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>																																																																
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B										
C	CONTRACTOR : ABB Contracting Company									
	CLIENT : National GridSA									
D	PROJECT : CONSTRUCTION OF NEW 132/13.8kV SS 8709 IN AL-KHARJ CITY									
	SUBSTATION : S/S 8709									
E	CONTRACT NO. : 11131113/00									
	TITLE : SCHEMATICS DRAWINGS +ACSE (AUTO CHANGE OVER SWITCHING EQUIPT.)									
F										
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		CONTENTS SHEET		<div>الشركة الوطنية لنقل الكهرباء National Grid sa</div>	
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			DATE STARTED 24.01.2013 DATE COMPLETED _____		S/S 8709 - 132/13.8KV IN AL-KHARJ CITY		INDEX		PLANT NO.	DRAWING NUMBER
	00	13 04	FOR APPROVAL		RIYADH SAUDI ARABIA		-	C421	CD-322962	
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC				SHEET NO.	REV. NO.
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NG/D2-D (2012/01)

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LEGENDS

±R1
±R2
±R3
±IT
FL
BB RS±
BB CBF±/CBF±

DC SUPPLY – MAIN PROTECTION
DC SUPPLY – SECONDARY PROTECTION
DC SUPPLY – BACK UP PROTECTION
DC SUPPLY – INTER TRIP
DC SUPPLY – FLASHING CIRCUIT
DC SUPPLY – BUS BAR – PROTECTION RESET
DC SUPPLY – CBF PROTECTION

R
CR
ECC
LOCAL
REMOTE

RESET BUS – ALARM SYSTEM
CONTROL ROOM
ENERGY CONTROL CENTRE
THE LOCATION OF CONTROLLED DEVICE
ANY OTHER LOCATION NOT LOCAL

ON
OFF
A
T
S
CS
CT
LS
LT
LC
LO
RO

CB NORMALLY OPEN AUXILIARY CONTACT
CB NORMALLY CLOSED AUXILIARY CONTACT
COMMON
TEST POSITION
SERVICE POSITION
CLOSE IN SERVICE POSITION
CLOSE IN TEST POSITION
LOCAL SERVICE
LOCAL TEST
LOCAL CLOSE
LOCAL OPEN
REMOTE OPEN

NOTES

LABELS
WHITE LABEL WITH BLACK LETTERING WILL BE PROVIDED FOR ALL MOUNTED APPARATUS EQUIPMENT IDENTIFICATION AND FUNCTION REFERENCE LABEL WILL BE PROVIDED FOR FRONT MOUNTED EQUIPMENTS OF THE PANEL AND EQUIPMENT IDENTIFICATION LABEL WILL BE PROVIDED FOR INTERNALLY MOUNTED EQUIPMENTS

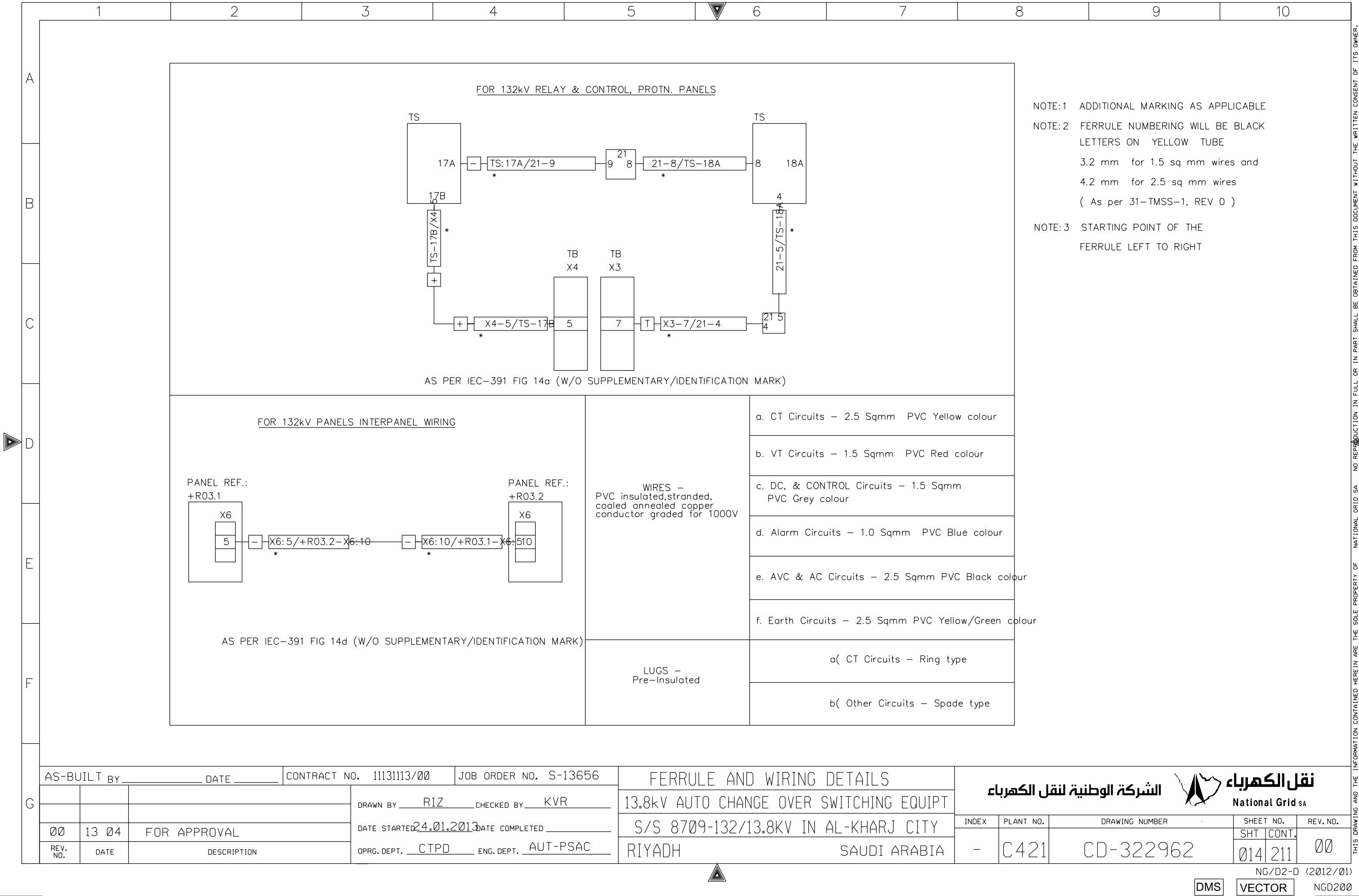
LUGS
A. CT CIRCUITS– RING TYPE
B. OTHER CIRCUITS – SPADE TYPE

FERULLING
YELLO TUBE 3.2 mm FOR 1.5SQ mm WIRES AND 4.2 FOR 2.5 SQ mm WIRES (AS PER 31 – TMSS–1, RE.0)

الشركة الوطنية لنقل الكهرباء		National Grid sa		
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
-	C421	CD-322962	SHT 013 CONT. 014	00

NG/D2-D (2012/01)
DMS VECTOR NGD200

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											CD-322936	132/13.8kV TRANSFORMER-1,2& 3 AVC PANEL	+AVC																																																																																					
											CD-322922	132KV SPARE-1 UGF RELAY PANEL -1	+R07.1																																																																																					
												132KV SPARE-1 UGF RELAY PANEL -2	+R07.2																																																																																					
											CD-322916	132KV 8020 UGF RELAY PANEL -1	+R02.1																																																																																					
												132KV 8020 UGF RELAY PANEL -2	+R02.2																																																																																					
											CD-322919	132KV 8710 UGF RELAY PANEL -1	+R03.1																																																																																					
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											CD-322925	132KV SPARE-2 UGF RELAY PANEL -1	+R06.1																																																																																					
												132KV SPARE-2 UGF RELAY PANEL -2	+R06.2																																																																																					
											CD-323012	132KV FOIP PANEL	+FOIP																																																																																					
											CD-322946	132kV BUS COUPLER-A	+R130																																																																																					
	CD-322948	132kV BUS COUPLER-B	+R230																																																																																															
	CD-322950	132kV BUS SECTION	+R120																																																																																															
CD-322991	132kV BUSBAR PROTECTION MAIN-1 CENTRAL UNIT PANEL	+BB1-1																																																																																																
CD-322993	132kV BUSBAR PROTECTION MAIN-1 BAY UNIT PANEL	+BB1-2																																																																																																
CD-322995	132kV BUSBAR PROTECTION MAIN-1 BAY UNIT PANEL	+BB1-3																																																																																																
CD-322997	132kV BUSBAR PROTECTION MAIN-1 BAY UNIT PANEL	+BB1-4																																																																																																
CD-322999	132kV BUSBAR PROTECTION MAIN-1 BAY UNIT PANEL	+BB1-5																																																																																																
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CD-323003	132kV BUSBAR PROTECTION MAIN-2 BAY UNIT PANEL	+BB2-2																																																																																																
CD-323005	132kV BUSBAR PROTECTION MAIN-2 BAY UNIT PANEL	+BB2-3																																																																																																
CD-323007	132kV BUSBAR PROTECTION MAIN-2 BAY UNIT PANEL	+BB2-4																																																																																																
CD-323009	132kV BUSBAR PROTECTION MAIN-2 BAY UNIT PANEL	+BB2-5																																																																																																
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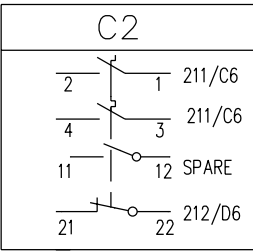
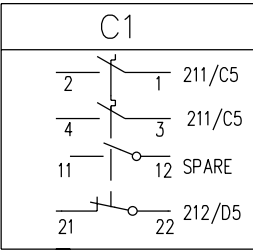
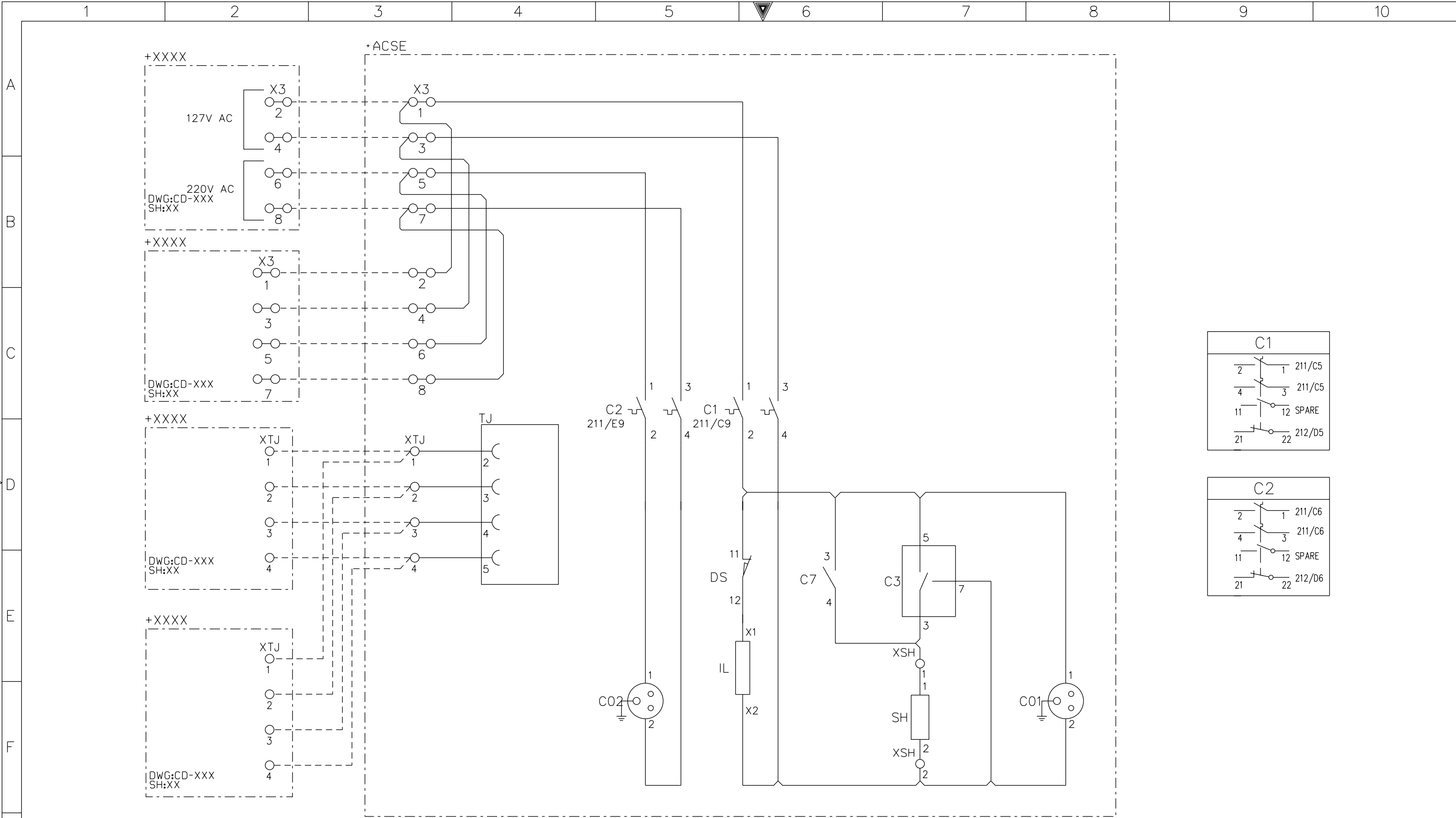


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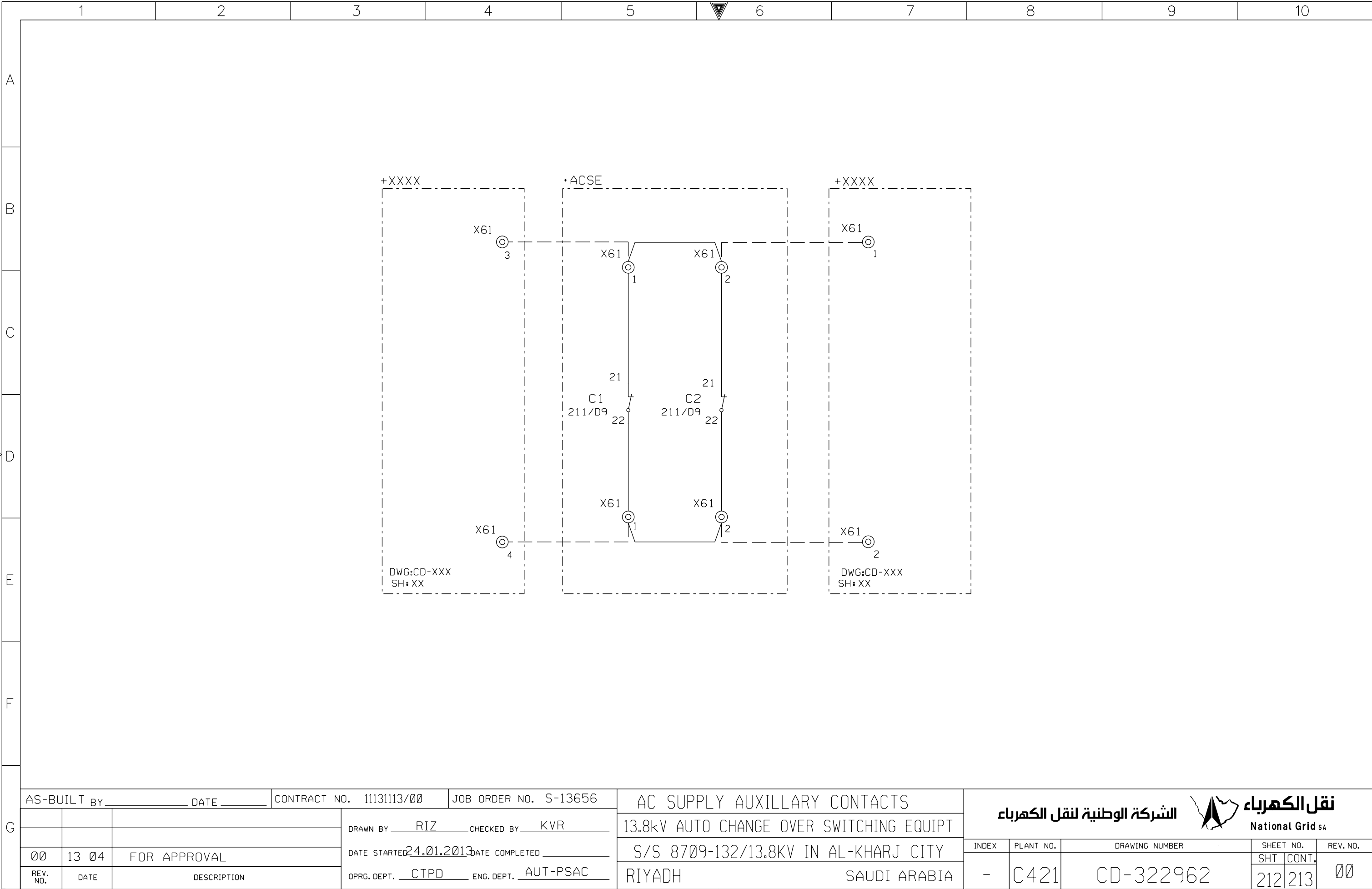
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NG/D2-D (2012/01)



AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		AC SUPPLY FOR ILLUMINATION&POWER SOCKET		
			DRAWN BY RIZ		CHECKED BY KVR		13.8kV AUTO CHANGE OVER SWITCHING EQUIP		
00			DATE STARTED 24.01.2013		DATE COMPLETED		S/S 8709-132/13.8KV IN AL-KHARJ CITY		
FOR APPROVAL			OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA		
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AC SUPPLY AUXILLARY CONTACTS

13.8kV AUTO CHANGE OVER SWITCHING EQUIPT

S/S 8709-132/13.8KV IN AL-KHARJ CITY

RIYADH SAUDI ARABIA

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FOR APPROVAL

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AUT-PSAC

DRAWN BY RIZ

CHECKED BY KVR

DATE STARTED 24.01.2013

DATE COMPLETED

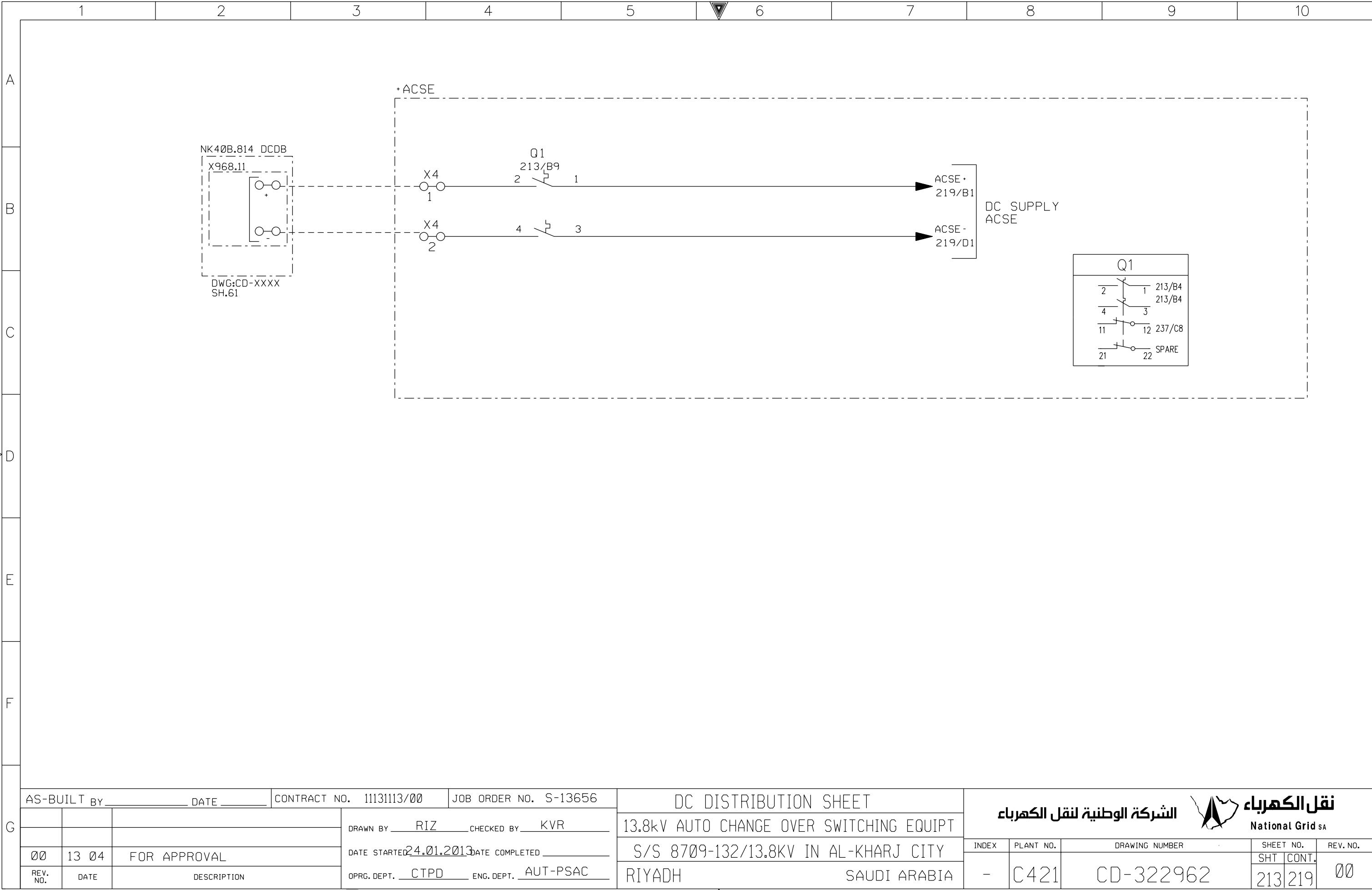
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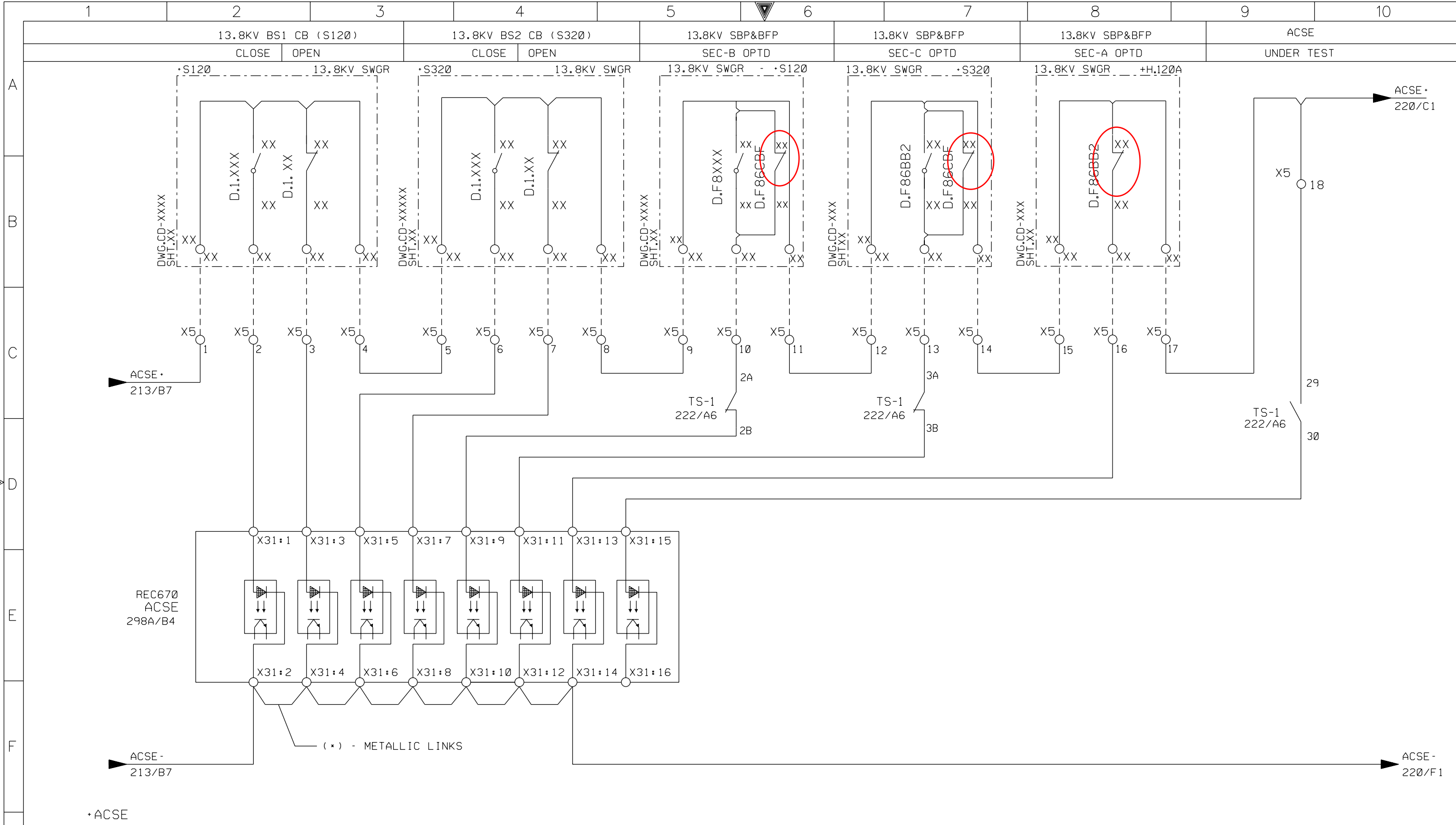
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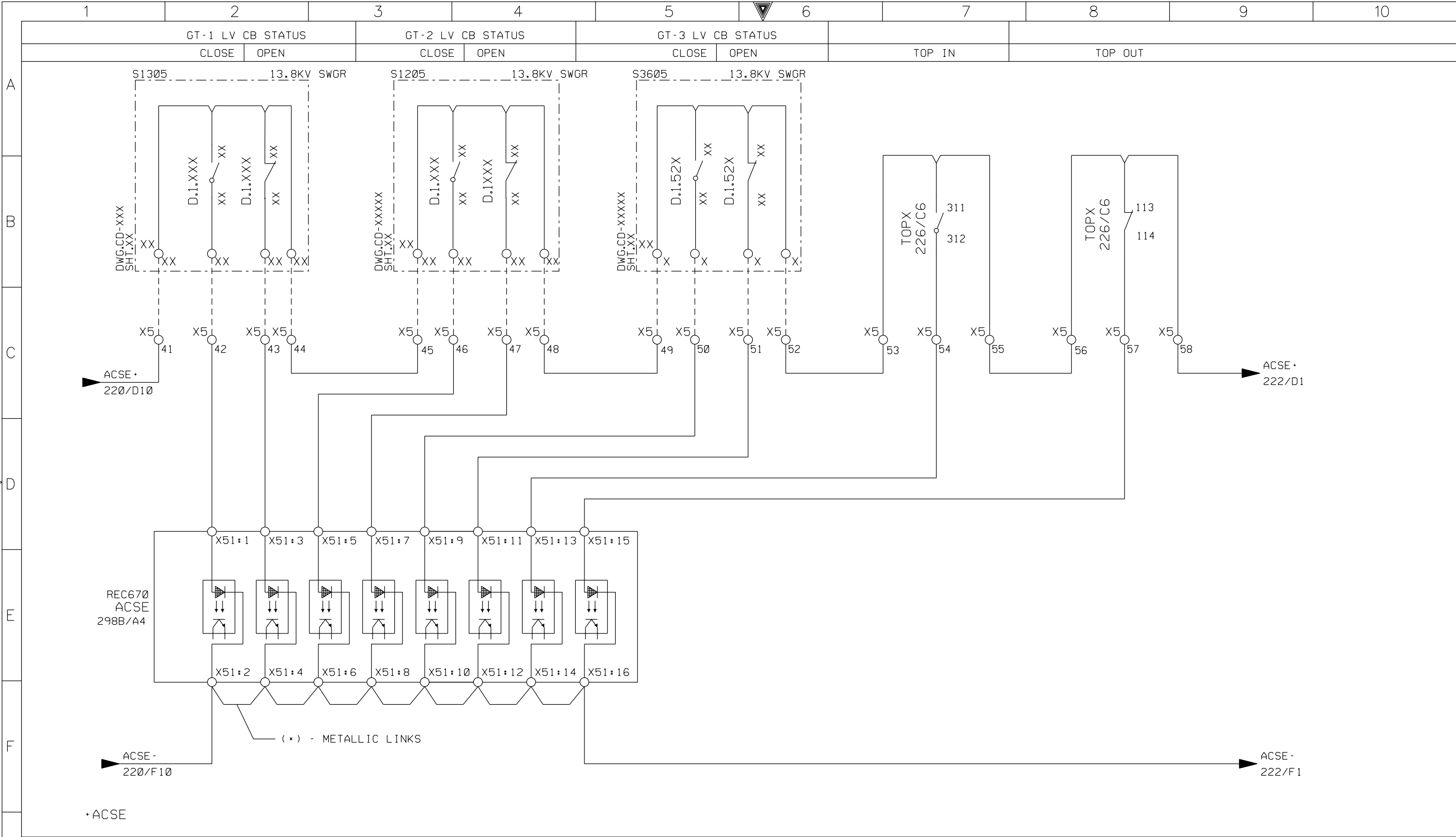
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G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		ACSE INPUTS		<div>الشركة الوطنية لنقل الكهرباء</div> <div> نقل الكهرباء National Grid sa</div>								
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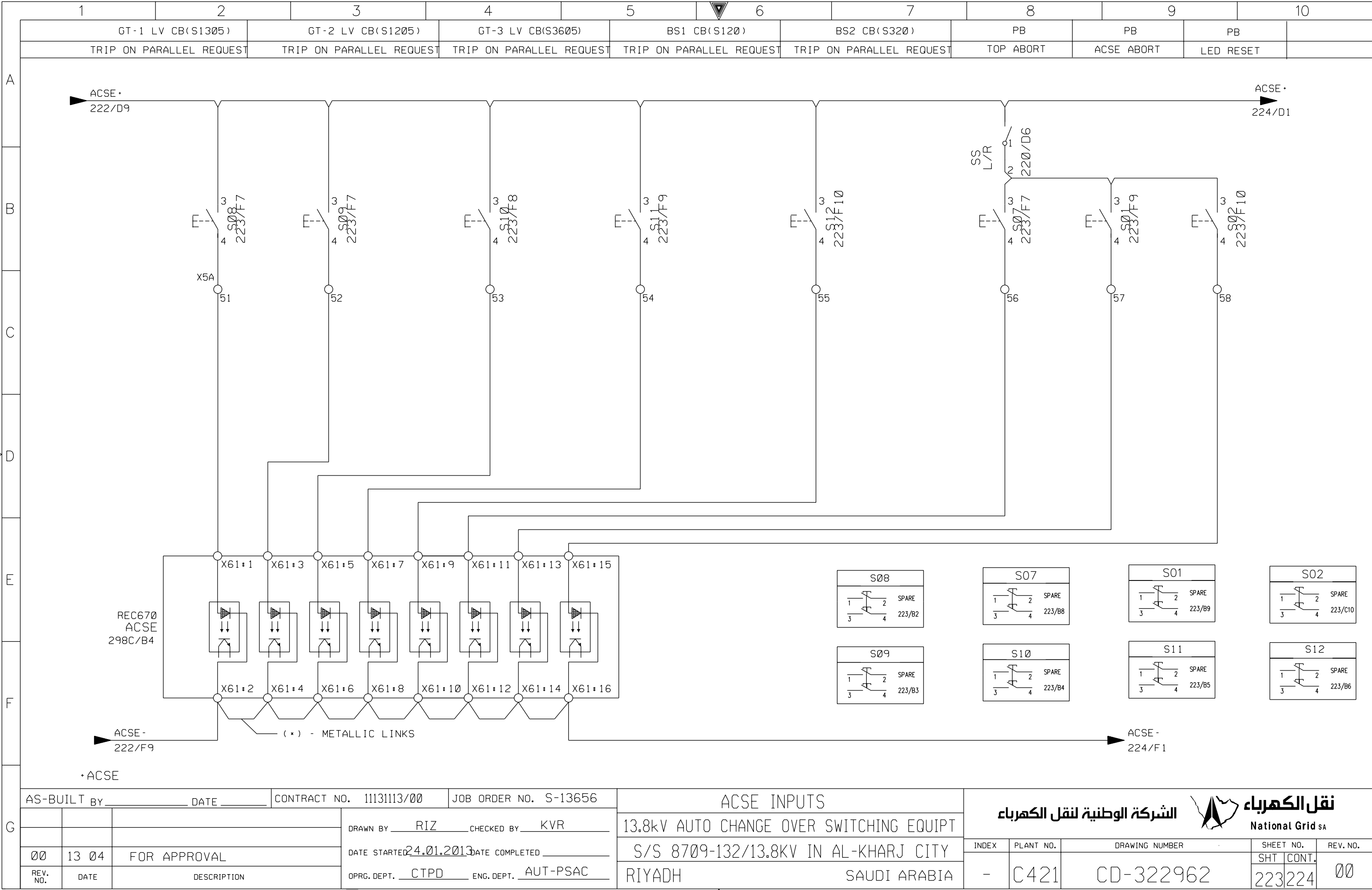
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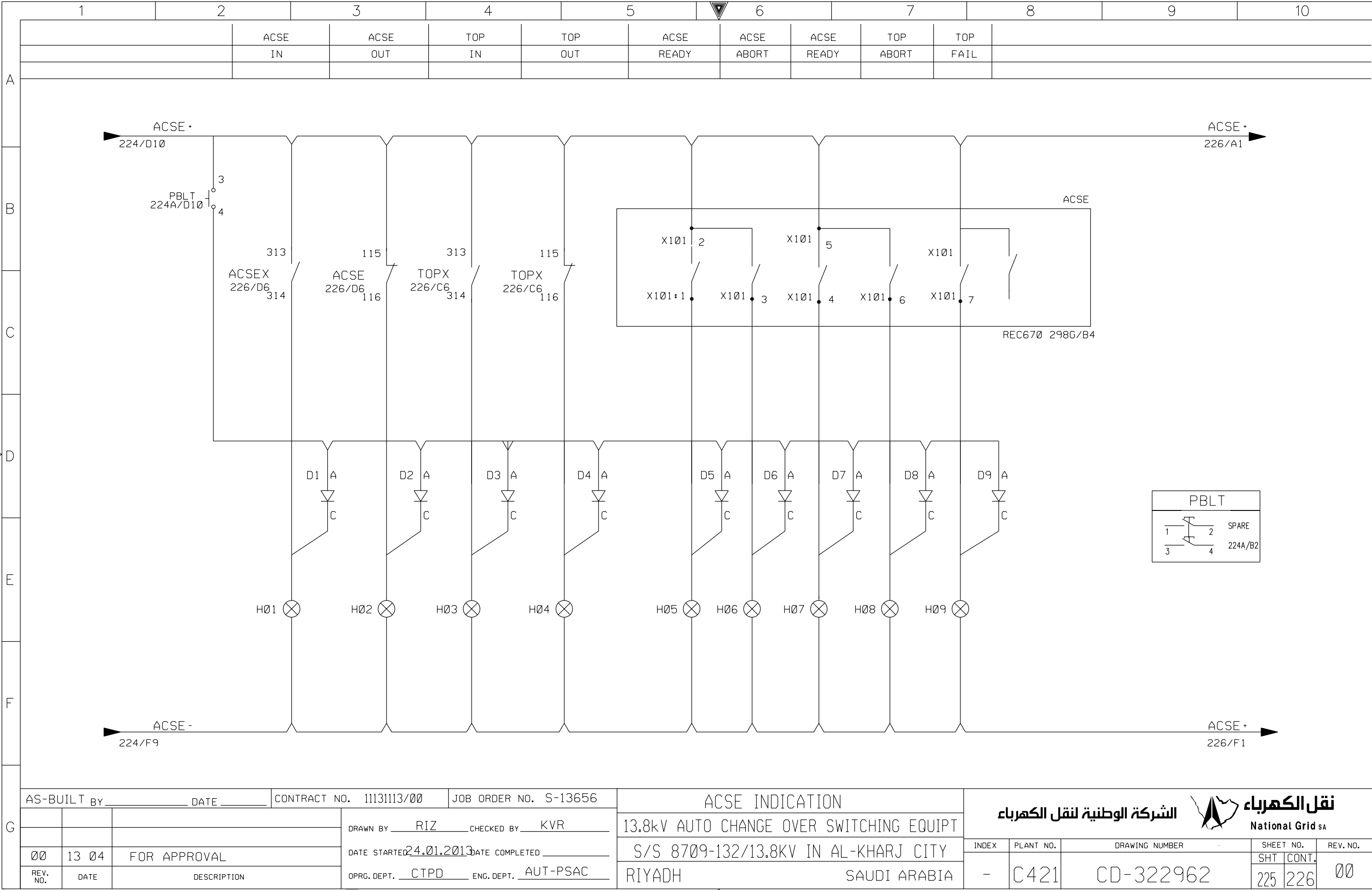
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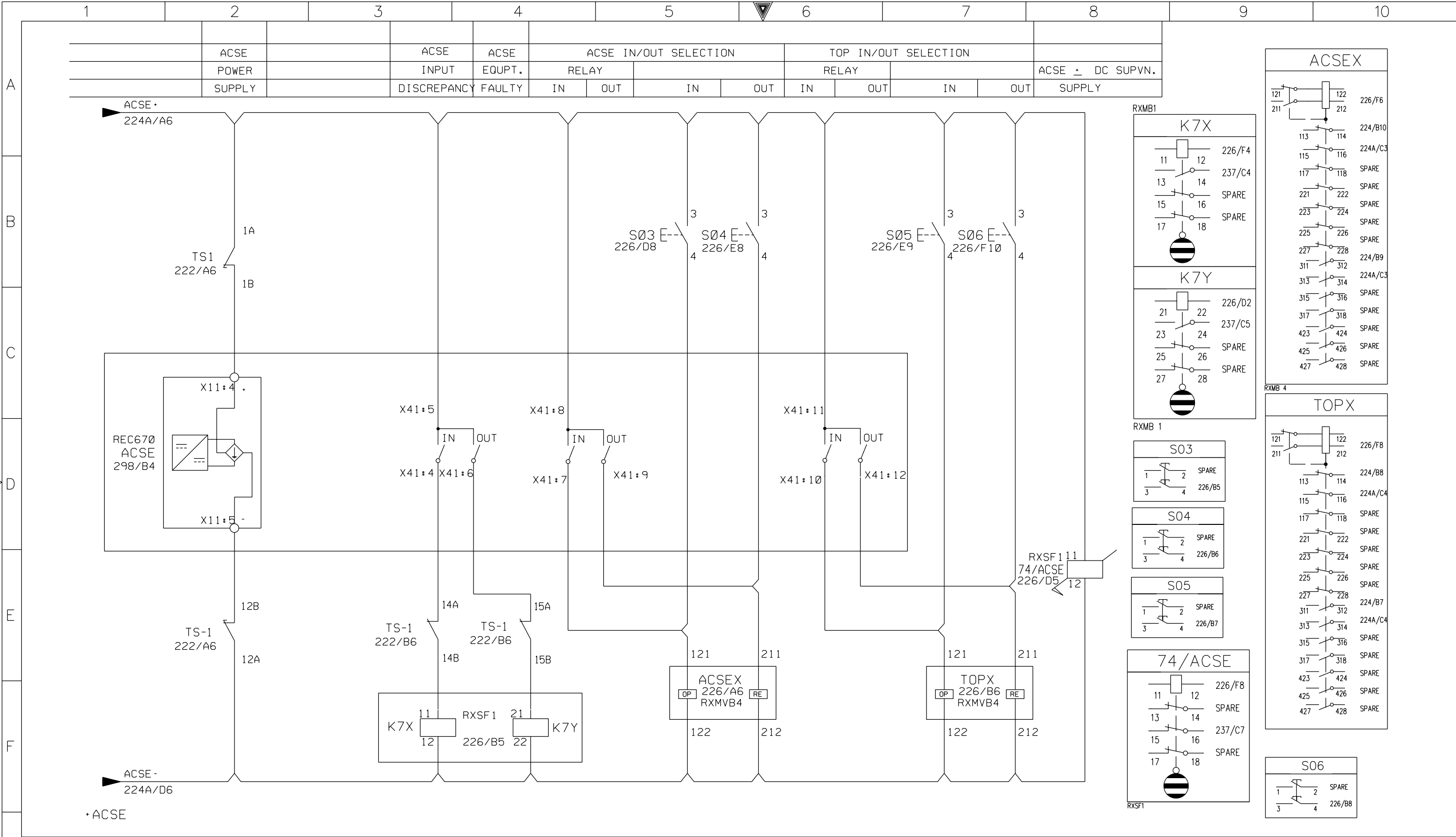
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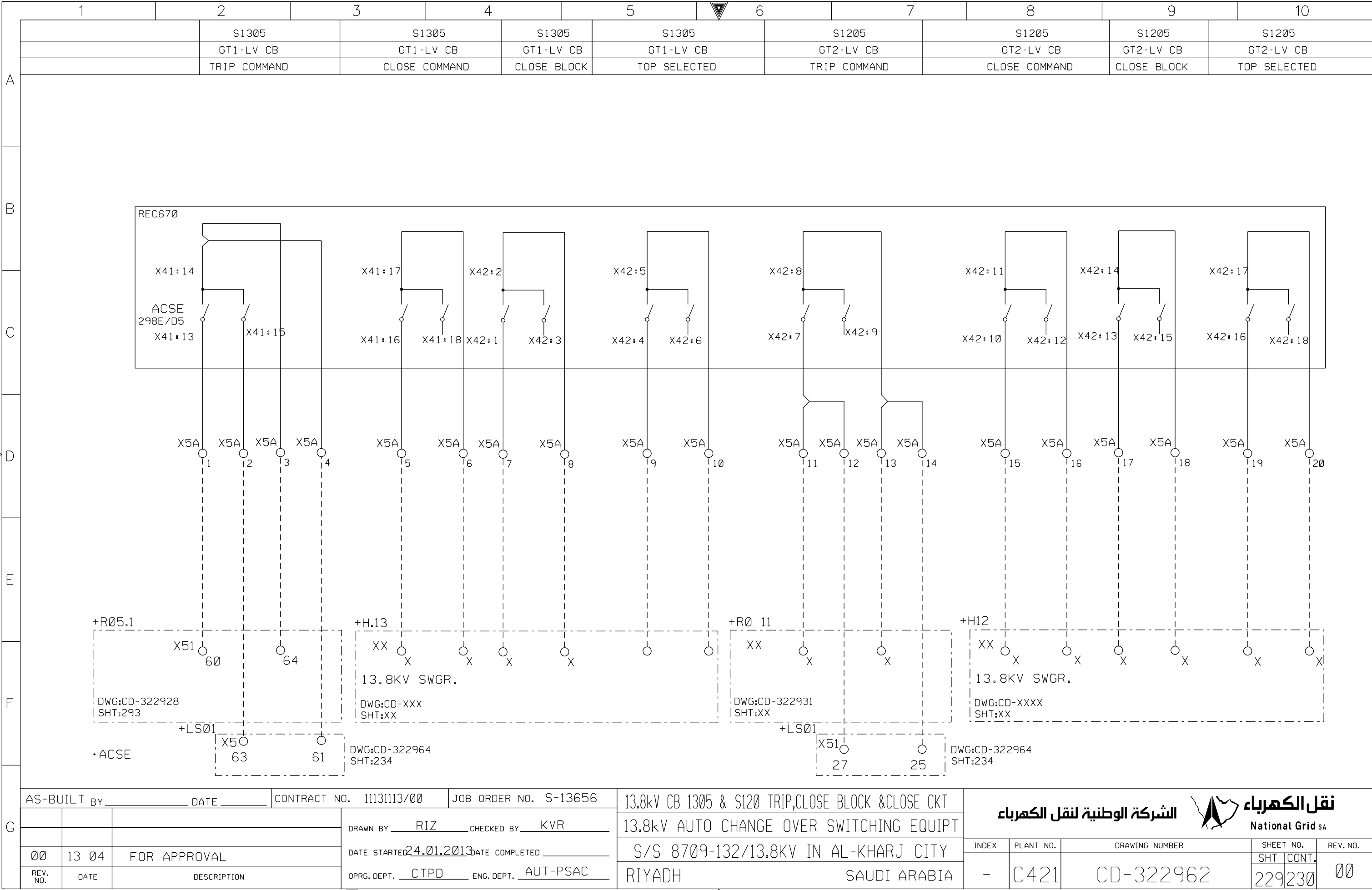
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13.8kV AUTO CHANGE OVER SWITCHING EQUIPT	
S/S 8709-132/13.8KV IN AL-KHARJ CITY	
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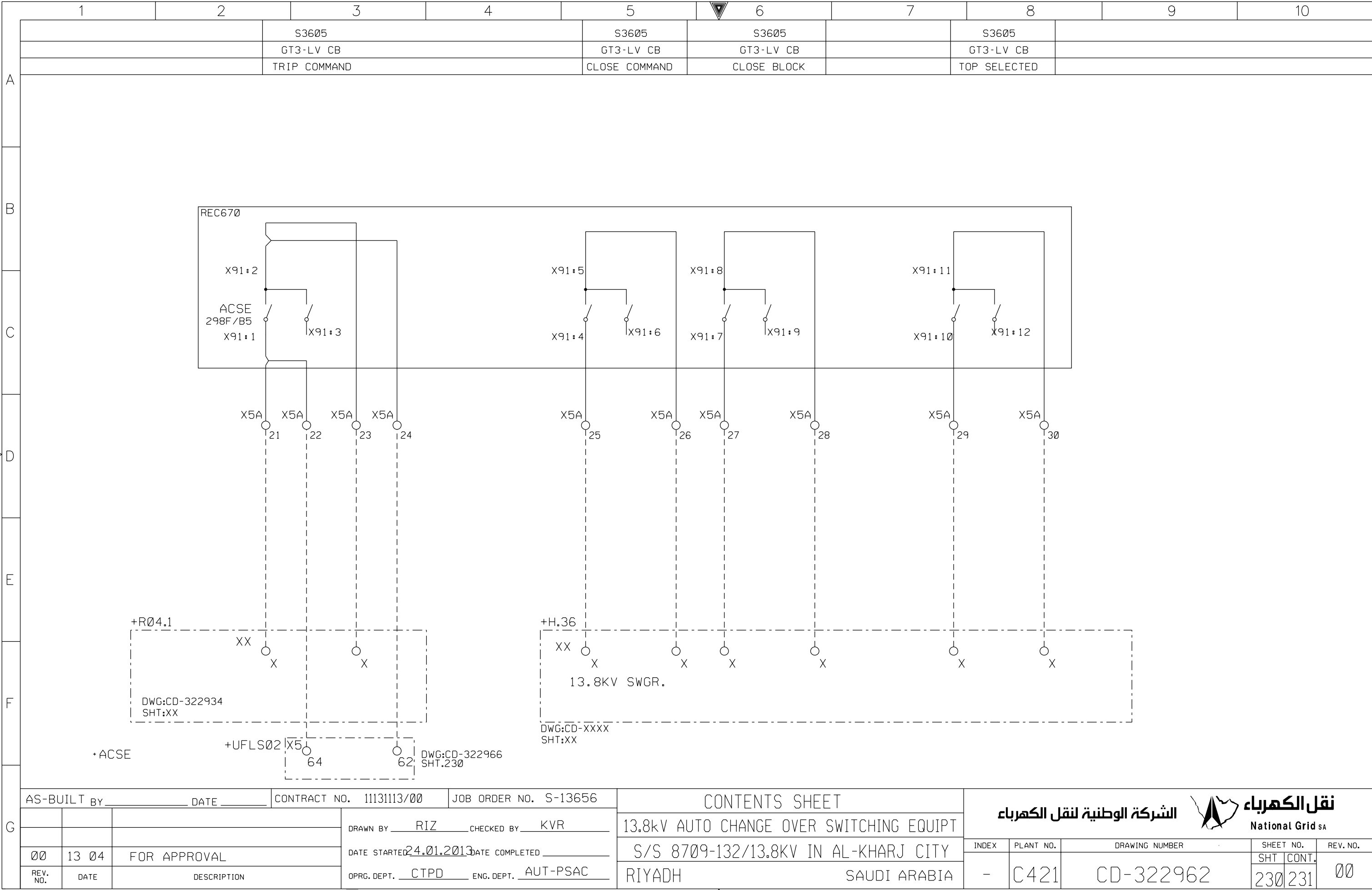


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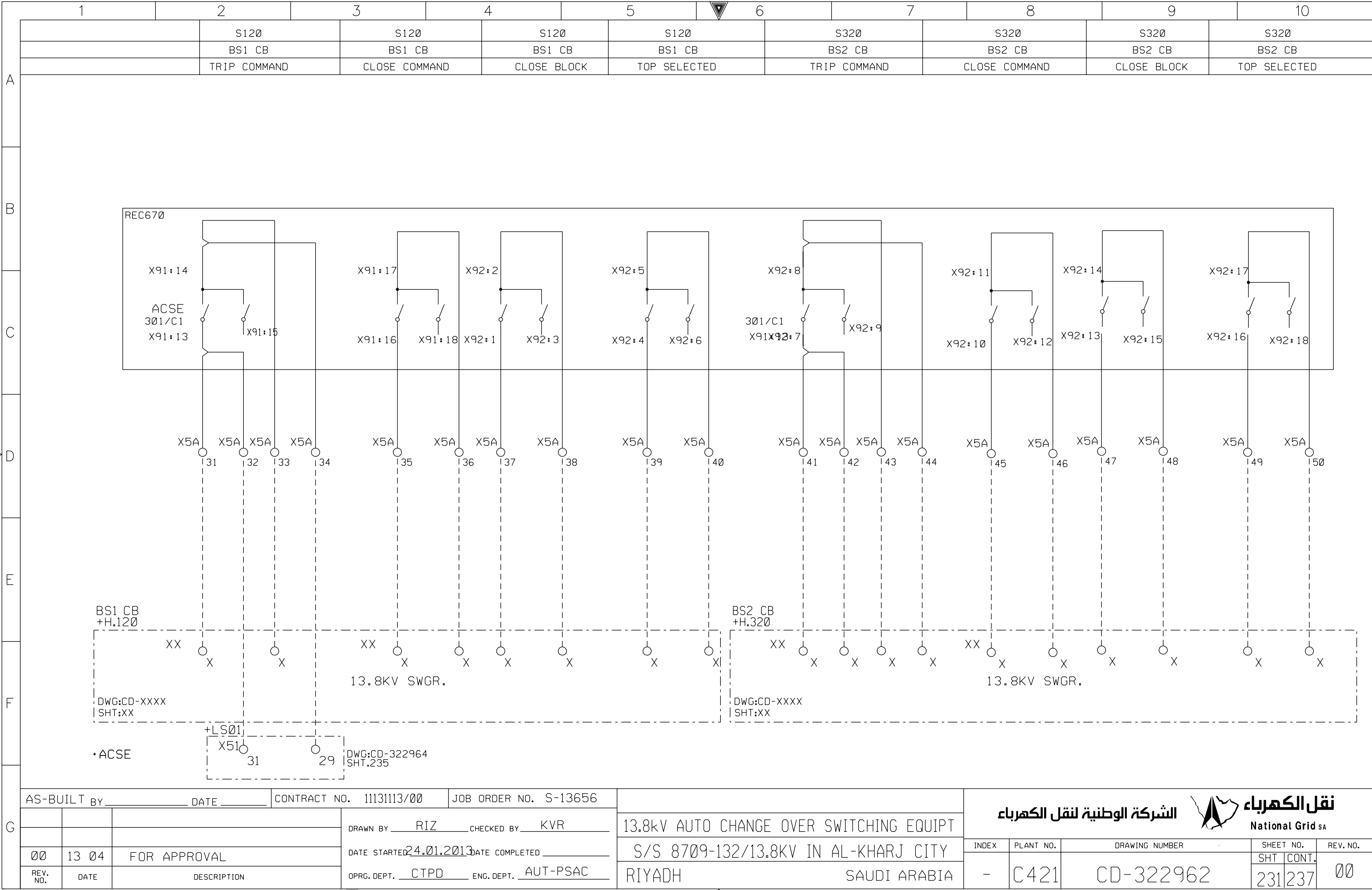
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S/S 8709-132/13.8KV IN AL-KHARJ CITY
RIYADH SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء
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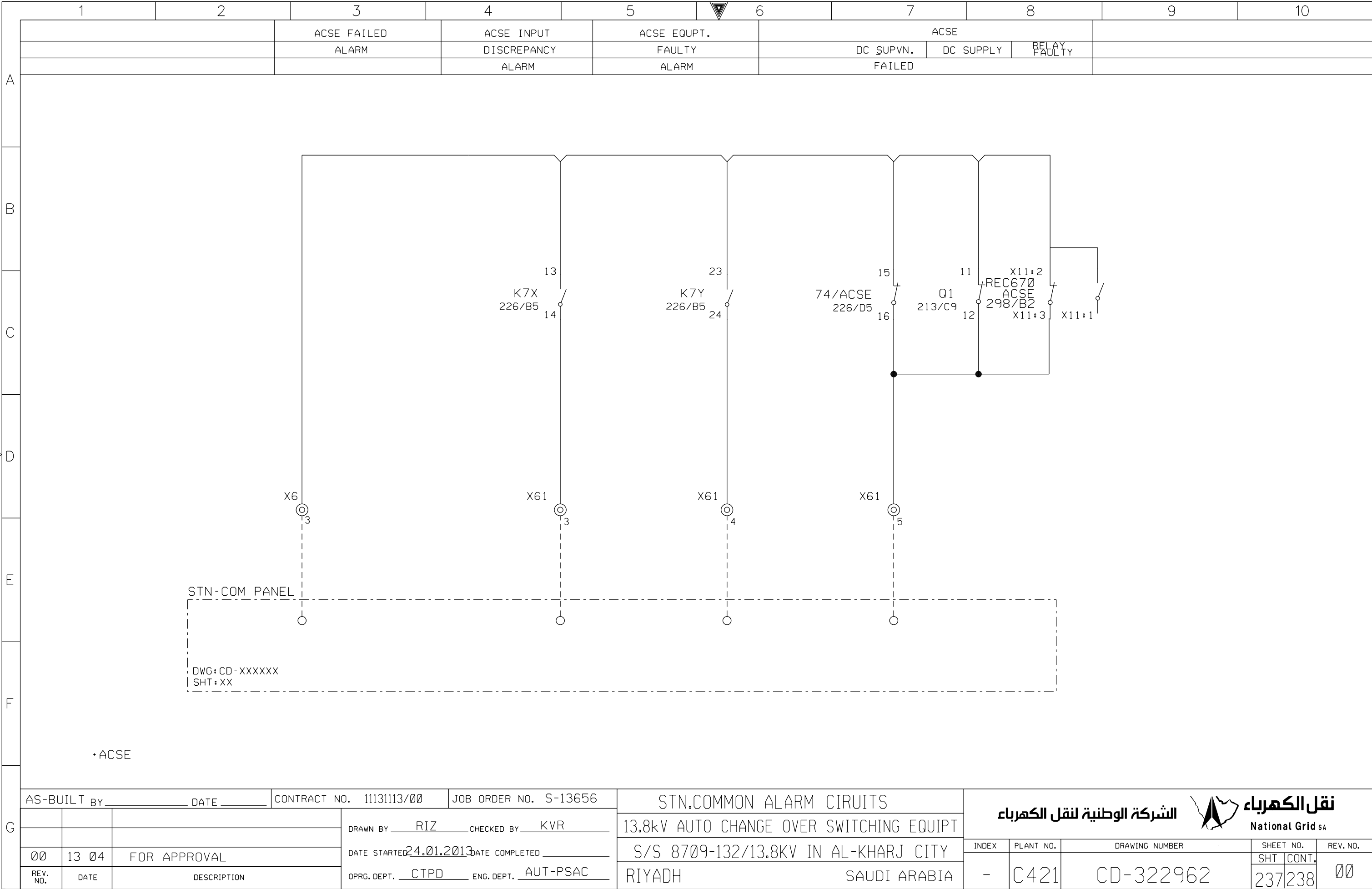
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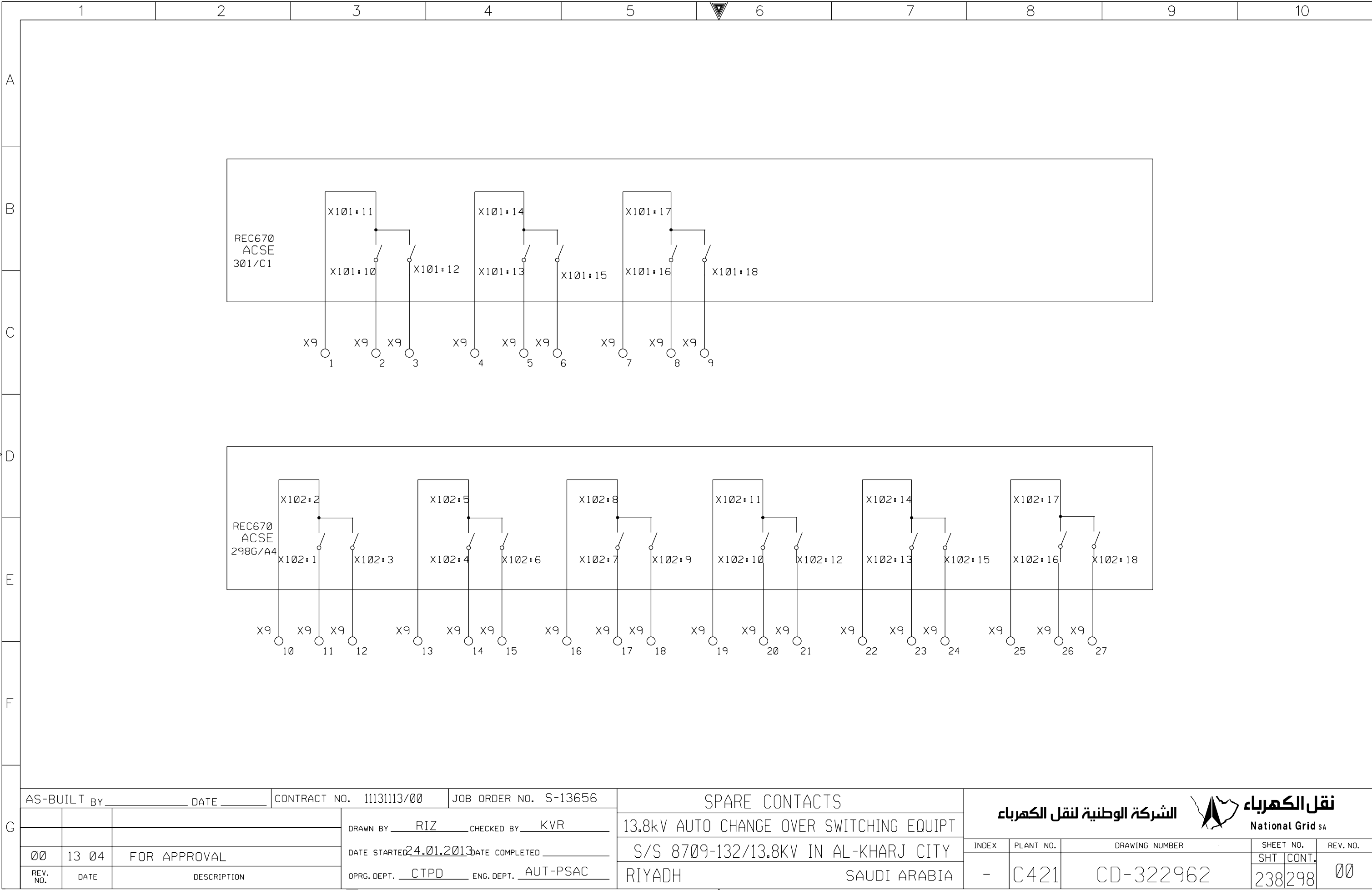


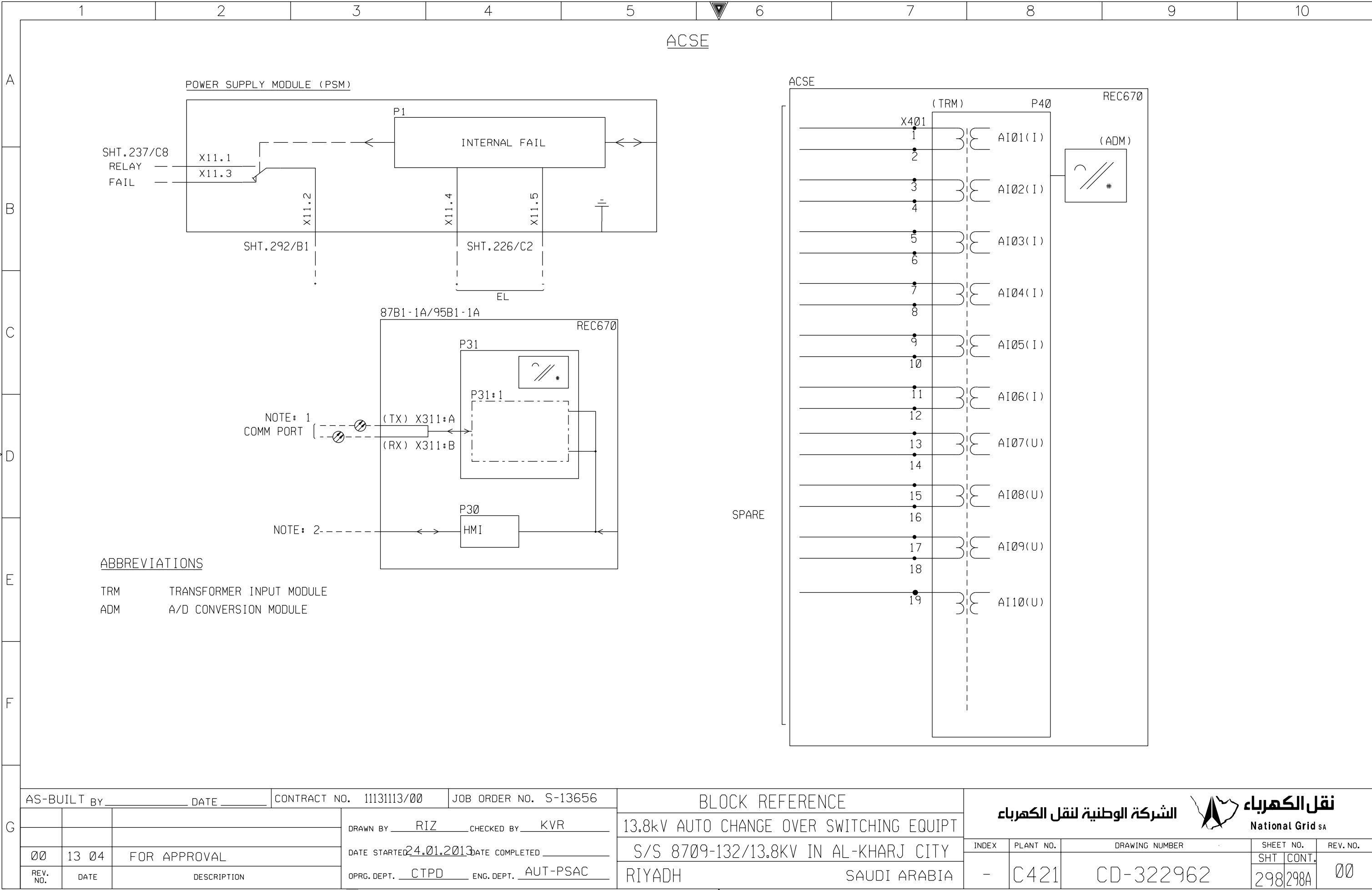
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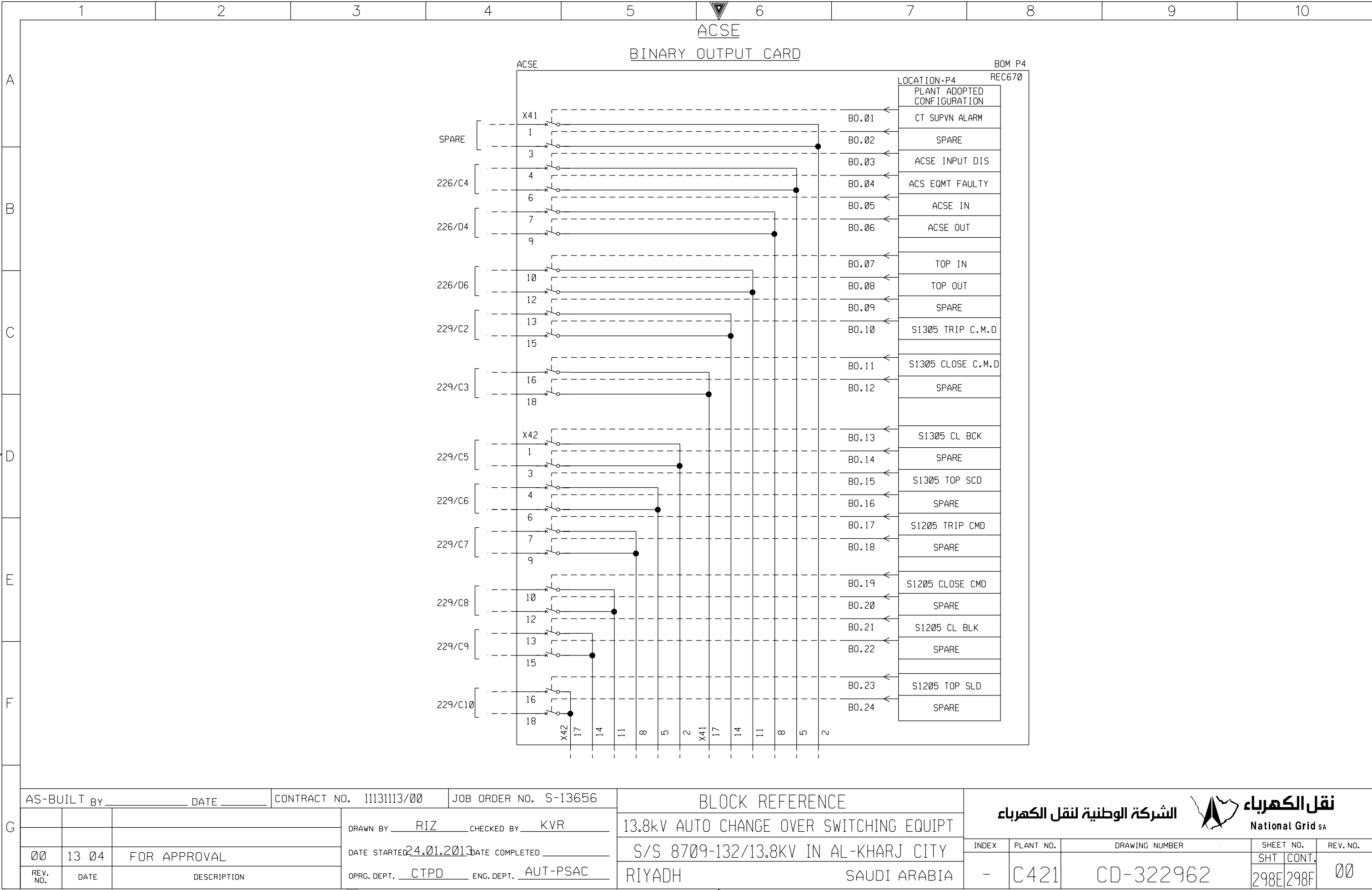
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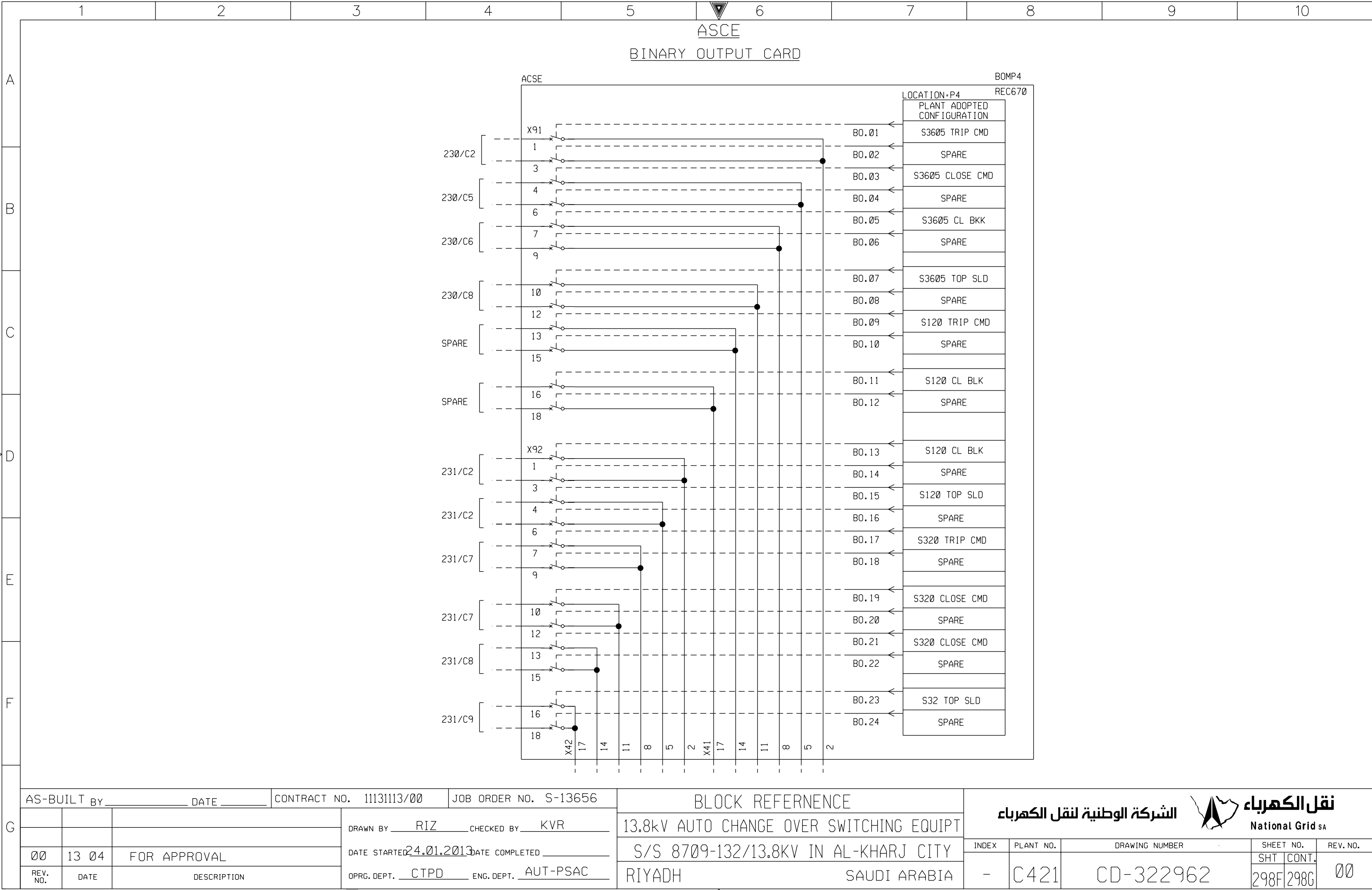
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S/S 8709-132/13.8KV IN AL-KHARJ CITY

RIYADH SAUDI ARABIA

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INDEX

PLANT NO.

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REFERENCE	X5A CONTROL & PROTN.	223/C8	51	223/C8	52	223/C8	53	223/C9	54	223/C9	55	223/C9	56	223/C10	57	223/C10	58	223/C10	59	224/C1	60	224/C2	61	224/C2	62	224/C3	63	224/C3	64	224/C3	65	224/C4	66	224/C4	67	224/C5	68	224/C5	69	224/C5	70	224/C6	71	224/C6	72	224/C7	73	224/C7	74	224/C8	75	224/A9	76	224/B9	77	224/C9	78	224/C8	79	224/D9	80	224/D9	81	224/D9	82	224/D9	83	224/D10	84	224/D10	85	224/D10	86	224/D10	87	SPARE	88	SPARE	89	SPARE	90	SPARE	91	SPARE	92	SPARE	93	SPARE	94	SPARE	95	SPARE	96	SPARE	97	SPARE	98	SPARE	99	SPARE	100	<table><tr><td>INTERNAL REFERENCE</td><td>X5 CONTROL & 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